LITERARY.

-The art-loving portion of the literary public are all waiting in a state of anxious excitement for the appearance of the concluding portion of Mr. Ruskin's work, "Modern Painters." The fifth and last volume, in which the great rhetorician brings his subject to a close, will be the most richly illustrated of the series, containing thirty-six steel plates and one hundred wood engravings. The plates include twelve from J. W. M. Turner, and eighteen from Mr. Ruskin's own drawings. The titles of the various divisions are oracular and suggestive, as usual, comprising Part VI. Of Leaf Beauty, 10 chapters; Part VII. Of Cloud Beauty-(Chap. 1, The Cloud Balancings; Chap. 2, The Cloud Flocks; Chap. 3, The Cloud Chariots; Chap. 4, The Angel of the Seal; Part VIII. Of Ideas Relation—1. Of Invention Formal, 4 chapters; Part IX., Of Ideas of Relation—2. Of Invention Spiritual. The volume has been tantalizingly announced as just ready for some time past, and will actually appear before the Fall.

-There have been recent reports from three of the great Public Libraries of Europe, the British Museum, and the Imperial Libraries of Paris and St. Pe tersburg. Any information of the kind always pos sesses interest to those who know what a focus of erary activity a Metropolitan public collection of books becomes under proper auspices. It is then, indeed, the great central battery from which radiate the electric currents to every corner of the state. The course of the British Museum is onward, under the spirited management of Mr. Panizzi; the splendid annual appropriation for purchases of books, of \$50,000, is continued, and the greatest difficulty is to make room for the flock of stu-dents who daily assemble under the shadow of the spacious dome of the new reading room. The French Imperial Library, is in gradual process of reorganiza-tion, and the vast collections of which it is composed will no longer remain the chaotic mass they hitkerte formed. A well-known antiquarian, M. Prosper Merimee, was detailed to examine the managen of the British Museum Library, and has thence de rived many valuable suggestions, now about to be reduced to practice. Rapid progress is made in cataloguing. Seven large quarto volumes, containing the printed books relating to the History of France, have been issued, and other branches are to follow. In the fine art department, nearly 800,000 engravings said to embrace 2,500,000 separate engrav ings. A distinct reading room has been appropri ated for casual visitors and general readers, apart from those devoted to students and men of science. From St. Petersburg there is sign of equal activity in the same direction. The Imperal Library is set down as consisting of nearly 900,000 volumes of printed books and MSS., an amount which, if correct, would place it above the British Museum, and second only to the Paris Library. Last year the readers amounted to 40,000. The hours of access are unusually favorable, the Library being open until 9 o'clock at night. One of the rooms has been converted by Baron Korff, the director, into a fac-simile Medieval Library, and here are kept the precious illuminated manuscripts, the block-letter books printed in the Fifteenth Century, and other rarities. Returning homeward, it may be mentioned that the Librarian of the Astor Library, D. Cogswell, is about sailing for Europe. He has at his disposal for purchases \$10,000-\$4,000 from the Library funds and \$6,000 from the private munificence of Mr. W. B. Astor.

-A translation of Dr. Von Hefele's Life of the Great Cardinal Ximenez, has just been published by Mr. Dolmarn, the Catholic publisher in London. It is characterized by great research, and affords an admirable subject for the biographer, who dwells with pride on the literary achievements of the Cardinal-the Complutensian Polyglot, and the Mosarabic Liturgy. He is sometimes at issue with our historian Prescott on the points always open to dispute between Catholic and Protestant writers.

-Lord Brougham's installation address at Edinburgh is described as an unparalleled feat for a man aged eighty-two years. It fills seventy pages of print, and occupied upward of five hours in delivery. The range of subjects is wide and diversified, from Hame's Argument on Miracles to the Politics of the present day. An interesting personal reminiscense of so distinguished an orator is interesting. "It is the greatest of all mistakes to fancy that a carefully-prepared passage cannot be delivered before a modern audience. I once contended on this point with a classical scholar, and no inconsiderable speaker himself-Lord Melbourne—who immediately undertook to point out the passages which I had prepared, and those which were given off-hand, and on the inspiration of the moment. He was wrong in almost every guess he

-The choice of a writer so distinguished in liberalism and fiction as the Rev. Charles Kingsley for the Professorship of Modern History at Cambridge is regarded as a concession to the progressive school rather at variance with Lord Palmerston's usual clerical appointments. The chair has not been prolific in literary works, Prof. Smythe's Course on Modern History and Sir James Stephens's Lectures on the History of France being all that have proceeded from it in the last half century. It will not be difficult for a brilliant writer like Mr. Kingsley to eclipse both his more staid

-The North British Review seems to have difficult work to trim its sails in accordance with the prevailing breezes of Scotch orthodoxy. A short time since a change in the publishing arrangements took place, in consequence of the alarm of some of its supporters at a speculative paper of Mr. Isaac Taylor's; and now, by another alteration, it will be issued by Messrs. F. and T. Clark of Edinburgh, whose doctrinal soundness is un-

-Dr. Smith's Dictionary of the Antiquities, Biography, Geography, and Natural History of the Bible, is now for sale at our bookstores—thanks to the enterprize of Messrs. Little and Brown, the joint publishers for America-at less than one-half the English price. The first volume only is yet published-Vol. 2, completing the work, will appear in about eighteen months. smoog the contributors appear the American names of Professors Calvin E. Stowe, Felton (of Harvard), Conant, Hackett, and others, juxtaposition with Dr. Stanley, Dean Alford, A. H.

Layard, Rawlinson, Jas. Fergussen, &c. In spite of the low price at which the original edition is offered, two houses have announced reprints, as there is no question that the work will take the highest rank among publications of its nature, and maintain it for many vears.

-The Parliamentary Committe on the renewal of the Queen's Printers' Patent, have recommended that it be not renewed, but that the printing of Bibles should be thrown open to any one who likes to engage in it. This result is arrived at rather from a dislike principle of monopoly, than from any complaint against the present condition of the supply—as for cheapness end accuracy, there are probably no books that can compote with the low priced copies of the Bible issued from the Universities and the Queen's Printers' office.

-Old Ballad Literature is to be further suriched by an exhaustive selection from the stories of Sam Pepy' Library at Cambridge, made by Dr. Rimbault, with an introduction containing new and concise particular respecting ballad lore, ballad writers, and ballad printers. At Magdalen College, Cambridge, are pre erved the books of the immortal diarist-in the ic cal cases just as they adorned his study in York Building, the shorter books, being made to range with the others by being placed on little blocks of wood, gilt to resemble the binding. Here among his volumes of tracts, bound up together and lettered, "Droll's Merriments," &c., nestle some of the choicest remains of old English literature, literally worth, in the hands of Messrs. Sotheby and Wilkinson, the auctioneers, "their weight in gold;" but nothing short of a revolution or a French invasion is likely to displace the from their resting-place of a century and a half.

-Mrs. Grotes's Life of the painter, Ary Scheffer, supplies a curious instance of the comparative isolation of two countries so near each other as England and France. It was not until tempted by the Mancheste Exhibition of Art Treasures, in 1857, that Scheffer ever ventured across the channel. He was then delighted and astonished at the specimens of the English school of painters. "I had no conception," was his confession, "how rich the English were." He adds: "There have lived great painters among you—that is unquestionable. I have been in a sort of Paradise of Art for these three weeks past. The power of dealing with color, especially, possessed by the English artists, fills me with admiration. I only wish it could be imparted to myself."

ART ITEMS.

-The National Academy of Design closes its Annua Exhibition to-day, and if the interest excited by this year's show of paintings were to be taken as an indi-cation of the popular feeling for art, the prospect would be anything but flattering for our artists. Though there has been so little excitement, the receipts of the exhibition have been about the same as last year. There has been no diminution in the number of visitors, which is in itself an encouraging sign, considering the lack of any strong attraction in the exhibition, and th absence from it of most of the artists whose works have for many years past graced the walls of the Academy. The Academy is now in an excellent condition, financially speaking, and so well satisfied are the members with the state of their affairs, that at a recent meeting of the Council it was proposed to make the Secretary, Mr. Cummings, a present of a thousand

-The opinions expressed by American letter-writers in relation to the prominent paintings in the present Exhibition of the Royal Academy are strangely at variance with the criticisms which have appeared in the London journals. Our countrymen do not appear to be favorably impressed by the "Black Brunswicker of Millais, and the "Flood in the Highlands," by Sir Edwin Landseer, which are so highly and universally extolled by British critics. And even Mr. Young of The Albion is rather sovere upon Holman Hunt's "Finding of Christ in the Temple," which is extolled in the English papers as a miracle of art. It has been stated that this last picture was purchased by the great London picture dealer for \$25,000, and it has since been stated that three Manchester men had subscribed \$40,000 toward purchasing it for the new Free Art Gallery in Manchester.

-A publication of considerable importance has jubeen undertaken in New-York by Mr. George Ward Nichols, proprietor of the Crayon Gallery, in Broad-way. It is similar in design to the well-known L. Art-iste Contemporaine of Paris, which, by means of the lithograph, has given the public so many of the beautiful and characteristic works of Meissonier, Decamps, Diaz, Gerome, and others. All the designs published are put upon the stone by the artists themselves. The first number of Mr. Nichols's publication, The Porte Eastman Johnson, A. F. Bellows, and George Inness. Being autographs, they have the characteristic touch of the artists, and each impression is essentially an original drawing. Mr. Brown's contribution to The Porte Crayon is a very fine sunny view of the Bay of Naples, and Eastman Johnson's is his lovely "Marguerite" at her spinning-wheel.

-Mr. Gibson, the English sculptor, who caused ensation among connoisseurs not long ago by his polyhrome-tinted statue of Queen Victoria, has completed receatly a figure of Hebe, which in addition to color, basbeen enriched by gilded armlets and a gilded dialen. If color is allowed on statuary, there is no reaon why it should stop short of an actual imitation of the hues of life, such as Shakespeare describes in "The Winter's Tale." Page once attempted to prove that this was in strict accordance with the method of the

New-York is probably the only city of equal opulence and population in the world which cannot boast of a free gallery of art. Dingy, calico-weaving, provincial Manchester is greatly superior to this city it the matter of art-exhibitions, and in the facilities for study afforded to young artists. But if our merchant princes do not subscribe liberally for the establishment of public galleries, they must be awarded the credit of pending money lavishly in the artistic embellishment of their private residences, which is, perhaps, after all, the best method of promoting the cause of art.

-George Inness has taken up his easel and left New York, to plant himself in one of the pleasant villages the vicinity of Boston, where he intends to reside permanently. It is the first instance we have known of New-York artist going to New-England to reside.

-Mr. Belmont is having his picture-gallery newly decorated and arranged, preparatory for the grand entertainment he intends giving to the Japanese Embassadors when they come to New-York.

-Elliot has completed his portrait of Mr. Durand for Mr. Walters of Baltimore, and has also painted a portrait of that liberal patron of art.

BOOKS RECEIVED.

Introduction to the Study of International Law. By Theodore D. Woolsey, President of Yale College, 12:10. pp. 485, James Munroe & Co. A Commentary, Critical, Expository, and Practical, on the Gospel of John. By John J. Owen, D. D. 12:10. pp. 592, Leavitt & Allen. History of the United States. By George Bancrolt. Vol. VIII. Sto. pp. 475, Little, Brown & Co. Morning Hours in Patmos. By A. C. Thompson, 12:100, pp. 262,

The Kellys and the O'Kellys. By Authory Trollope. 12me. pp. 422. Ruddsk Carleton.

The Young Farmer's Manual By S. Edwards Todd. 12mo.
pp. 439. C. M. Saxton.

The Select Academic Speaker. By Henry Coppes, A. M. 12mo.
pp. 572. V. H. Butler & Co.

The Little Beauty. By Mrs. Grey. 3 vols. in one. 12mo.
pp. 626. T. B. Peterson & Brothers.

A Voice from the Newsheys. 12mc. pp. 135, Published for the
Benefit of the Author.

FROM JAMAICA .- We have Kingston papers to May 21, by the brig Los Amigos.

There had been within six weeks four attempts to

sebel against the authorities of the prison, one of which had to be subdued by the military, the police being inefficient. The rainy season had set in.

The last reported sales of Sugar were at 16/ per 100

SCIENCE, INDUSTRY AND INVENTION LIGHTNING-DISARMING A THUNDER

CLOUD. The remark is often made that casualties by lightnin are annually increasing in number, notwithstanding the multiplied pre-autions taken to guard against them But it may well be doubted whether they occur more frequently, in proportion to the increased population than in former years. There are now so many news papers in the rural districts, that every local incident of the kind is quickly caught up, put into print, and sent off on its travels. It must be to the modern thoroughness with which they are reported by the local press that the idea of their increased frequency is be attributed; for a careful record kept Meriam of Brooklyn shows that there is but little nual variation in the number of these casualties. In 1858 there were 56 persons killed and 66 injured b lightning, while in 1859 there were 76 killed and 44 in jured, being two less than the year before. During the many years of observation which this gestleman has devoted to the phenomena of lightning, he says that no case of death has happened to a person lying on an iron bedstead, or in a house or building having a metallic roof. He avers that persons in iron buildings, iron vessels, within railroad cars, on board of steamboats or ocean steamers, or in vessels furnished with metallic conductors, continue to enjoy complete protection from death or injury from lightning. So also with those in ordinary buildings furnished with proper conductors. Mr. Meriam thinks that thunders and lightnings are engaged in other labors than those usually recorded as lightning incidents. Distant thunder, for instance, will curdle milk and stop the fermentation of brewer's yeast, while active light putrefies the fresh meat hanging on the butcher's stall. The potato rot will yet be identified as the result of electrical influences. Diseases in the human system have long been suspected of a similar origin, while others are undoubtedly aggravated by this mysterious agent of the Almighty. Cholera, and kindred complaints, are largely influenced by thunder and light-ning, and so with yellow fever; for in countries where no thunder and lightning are active, these scourges are unknown. India, where the lightning is awful and the thunder terrific, has in cholers an ever present scourge while California, where the thunder gust is unkown has been pronounced the healthiest climate in the

It is remarkable that large cities enjoy an almost perfect immunity from danger to life by lightning This remark applies as well to American as to European cities. Between 1800 and 1851, not a single death by lightning is recorded as having occurred in Paris, whil throughout France, from 1835 to 1852, the average annual number of seaths from the same cause was 7 In 1835 the number killed was 111. During 30 years in which 750,000 deaths occurred in London, two only had been produced by lightning. Twenty-five per cent of all the deaths from this cause happen to persons under trees. From this data it is evident that lightning finds more victims in the open country than in cities. There are definite reasons for enjoyed by citizens. Large towns are made up of loft buildings, multitudes of which are covered with me-tallic roofs, from which tin or iron gutters lead off the rain water. They contain many churches, most of which have ostentatious spires armed with lightning rods. Private dwellings are protected in the same way, so that the city in reality bristles with metallic points, each of which, presented to the thunder cloud, discharges silently but surely, a portion of its destruc tive energy. This vast array of conductors groupe up within a limited area, must, of necessity, carry of the electricity of an overhanging cloud, not, it is true as rapidly as it is generated in Nature's great laboratory but rapidly enough to mitigate its intensity. Who the bolt does fall, it lights on some one of these multitudinous points, which thus performs its wonderful office of carrying the explosion harmlessly off.

The facilities for insuring protection from the rav-

ages of lightning have so multiplied within twenty years that thousands have in consequence adopted them. Formerly, the only person who undertook to put up a conductor was the blacksmith. Many times when applied to he had no suitable material, and was compelled to forge a clumsy rod, containing three times the quantity of iron really necessary, with clumsier joints and staples, which he placed upon the building without any intelligent reference to either how or where it ought to be secured. Such a fixture necessarily costs so much as to prevent many householders from protecting their buildings. Farmers, it is true, frequently supplied their barns with conductors; yet the intelligent reader can bear testimony to the fac that barns were certainly destroyed more frequently er years than now, though their number to the increased facilities enjoyed by the community for obtaining conductors. Now, instead of going to the village blacksmith, the lightning-rod peddler comes to the farmer's door, displays a light, neat, artistic article, which he sells at one-third the price the blacksmith charged, and, being provided with staples, points, and ladder, puts the rod upon the house immediately, the whole cost being only a few dollars, and moves off to repeat the process on the adjoining farm. It is well known that these peddlers have traversed nearly every State in the Union, and that they are doing so while we write. They have put up millions of feet of iron. So great a business has been done in this line that s dozen patents for lightning-rods have been taken out and, being vigorously urged on the community, hav made their owners rich. It is to the thoroughness with which these men have canvassed the country that any dimirution of casualties must be attributed. It is true that an enlightened public sentiment has demanded nore generally than twenty years ago an increased protection from the ravages of lightuing, but these nen have ministered to it by bringing to every man's door the protection he was auxious to secure. It must be evident that at least nine-tenths of these peddlers were the merest mechanics that could be set to work at such business: that though they knew how to drive a staple and screw up a joint, yet that they were utterly ignorant of the whole theory and science of electricity and that when they did put up a conductor correctly, i was altogether an accident. The owner left every thing to the peddler, and the peddler put up the rod, not in quantity or position as true science would have dictated, but as he found it most conveniently and most quickly to be done. A ride through any part of the country will satisfy the intelligent observer, familiar with the duties a conductor is intended to fulfill, the dangers it is to avert, and with the rules to be observed in erecting it, that the whole business has been intrusted to ignorant men. Most unfortunately, those who bought the rods were themselves too ignorant to correct the blunders of those who nut them up. Yet in spite of these mistakes, they have given a measura-ble protection to thousands of houses, many of which have received a shock on their blundering conductors, and found safety in them.

Although Franklin identified the flash from a thunder-cloud as electricity, yet it was reserved to Andrew Crosse to dissect the cloud itself. By a most elaborate arrangement of metallic wires, he succeeded in obtain ing an insight into the tremendous composition of a thunder-cloud, such as the cheap and temporary apparatus of Franklin was incompetent to afford, and such indeed, as his mind never contemplated. Franklin re solved the grand problem, while Crosse added the details. He stretched a vast net-work of wires across the tops of the trees composing a large forest, and so combited them as to prevent a dispersion of the fluid. These wires were feelers thrust out to gather in from distant clouds and fogs a more terrific volume of elecsicity than human temerity had ever ventured to collect, so that it might be examined at his leisure in the laboratory. This was a chamber with an arched roof. filled with voltaic batteries, electric jars, galvanic piles, and other paraphernalia of the electrician Subtle streams of the mysterious fluid flowed in in silent but ceaseless currents, piling up little mineral fabrics, and fashioning the obedient atoms into exquis-

of wires poured its perilous accretions into a large brass conductor fixed and insulated on a table. When these accretions became dangerously great, a con-trivance permitted him to turn off the current, and dis-charge it into the earth without entering the chamber. An arrangement of balls enabled him to detect the smallest quantity of electricity in the atmosphere. These balls gave token of an approaching thunder-cloud, long before it made itself known to the multitude. Spark following spark, and explosion succeeding explosion, rapidly repeated, and increasing in en-ergy as the commotion gathered force, enabled the adventurous observer to look into and dissect the cloud, and to listen to its language, in his chamber, long before those outside could distinguish even its mutterings. As the margin of the approaching cloud overhung the not-work of wires in the tree-tops, a spark was seen, a detonation heard, and these flashes and explosions were repeated at intervals. A pause ensued, and then the apparatus gave forth another set of sparks and snappings, but differing from the first, which were negative, while these were positive. After a second pause a more energetic display succeeded, but of negative electricity, to be succeeded by another display of positive. Then followed a more numerous and brilliant succession of flashes, announcing that another zone of vapor was sweeping by, to be followed, after a brief interval, by a corresponding zone of positive electricity. As the cloud drew nearer the intervals of repose became shorter, and a stream of living fire was seen to pour from one conductor to the other. When the center of the cloud stood directly over the tree tops, the effect was awful. The wires, plunging into the electric atmosphere which invariably precedes and sur-rounds a thunder-cloud, sucked out the lightning from its very heart, and it leaped madly from ball to ball, instant death being in every explosion to him who im-prodently approached too near. This terrific exhibition of the forces embodied in the cloud continued for a longer or shorter period, according to the magnitude of the storm and the consequent disturbance of the electri-cal equilibrium. As the excited vapors rolled by, the explosions diminished in number, and a series of twin explosions diminished in number, and a series of twin eruptions alternating with periods of repose, showed that the latter half of the cloud corresponded in its electrical arrangements with the former half. Gradually the languid flash and snap announced that the disturbance had ceased, and that the storm was traveling over some new locality, there to let loose the unexpended

remnant of its wrath. remnant of its wrath.

This dangerous but really successful effort to explore the mysteries which are locked up in the thunder-cloud, has yielded no practical result. The science of protecting human life from lightning remains precisely where Franklin left it. His single discovery placed it, at a single bound, in the front rank of the definite arts, and we know no more now than he taught us a century ago. His first lightning-rod he put up on his own house in Market street, Philadelphia. This rod descended to the second story window, where it entered the chamber of the philosopher. Here, being discon-nected the distance of a few feet, the intervening space was occupied by a string of bells. At the ap-proach of a thunder-cloud the same disturbances were oticed and recorded which Mr. Crosse has so elab rately caused to be repeated. The bells were rung by he electricity as it passed in a silent stream through the rod to the earth. It is curious to note how absolutely perfect in all its details this wonderful discove ry came from Franklin's mind. He has given in his own brief directions not only the germ of his great invention, but a specification so minute and accurate that the advancing science of an entire century has been unable to improve on it. In his Poor Richard's

Almanae for 1753, he publishes the following:

"How to Secrem Houses, &c., when Lightman, —It is pleased God, in his Goodness to Mankind, at length to discot to them the Means of securing their Habitations and other Bod ings from Mitchief by Thunder and Lightning. The Method this: Provide a small from Rod (it may be made of the R Iron used by the Natiers), but of such a Length, that one E being three or four Feet in the model Ground, the other may give or eight Feet above the highest Part of the Building. The upper End of the Rod fasten about a Foot of Brase Wire, Size of a common Knitting needle, sharpened to a fine Polite Rod may be secured to the House by a Few small Stapi If the House of Barn be long, there may be a Rod and Point each End, and a middling Wirs along the Ridge from one to tother. A House thus furnished will not be damaged by Lighing its being attracted by the Points, and passing thro the Minto the Ground without hursten any Thing. Vessels also, him a sharp pointed Rod, six of the Continual Co Almanae for 1753, he publishes the following:

These directions are correct in every particular but on and that is, they seem to contemplate the protection small houses only. He should have added that the number of points on which the shock might fall, and the number of outlets through which it might be disharged into the earth, should be multiplied in proportion to the dimensions or magnitude of the building to be protected; for the greater its size the greater should be the number of receiving and discharging points. But, brief and simple as they are, they have been the means of saving numberless lives on land and sea, and it is only when they have been violated or neglected that the lightning-rod fails to be a complete protection. A year ago we noticed that a Western school-house had been struck and nearly demolished by an explosion of extraordinary energy, and teacher and scholars knocked senseless on the floor. Such a rod as Frank-lin describes would have effectually protected the building and its inmates. The shock would have been received on one of the two points he recommended. Being supplied with two outlets, and the rods connected by another rod across the ridge-pole, the dis charge, intense as it was, would have be broken up and distributed from one rod to the other, diluted as it were, over a great surface, and being thus divided into two streams, each having only half the destructive energy of the original, would have passed off harmlessly by two discharging points into the earth. Such a rod would not have cost the school committee more than \$6, yet it is probable not more than one school-house, academy, or church in five thousand, is provided with this cheap and reliable protection. A striking illustration of this occurred at town, in this State, in July of last year. A hop-yerd at that place, covering 31 acres of ground, had the ines supported on strings, which were attached to iron wires running from post to post. These wires were connected by other cross wires, forming a sort of metal lace-work overhead, but having no outlet to the earth. The wooden poles which supported it we non-conductors; it was, therefore, the spot on which lightning would play the most riotous havoc. A thunder cloud coming up, it let fly a single bolt on one of the outside poles, and from this point the lightning flew over the whole net work of wire. thence down the strings, vines and poles to the earth, but shatterinc some seventy of the latter into solinters, tearing many of the vines up by the roots, and utterly destroying all the rest. The defect of this otherwise excel lent arrangement must be obvious-it held up to the bolt a multitude of receiving points, but it furnished no discharging points. Had the latter been present, the vines would have been but little injured. If there had been no network of wire, the destruction would have seen confined to the single pole on which the bolt had

The theory of a thunder-cloud and a conductor, ough to be better understood in this country than it is, seeing that it lies almost in a nutshell. Lightning obeyr me unvarying law-it uniformly follows the best con tinuous conductor-but no conductor can be considere a good one, unless it is continuous. Numerous evinees of this have been afforded by broken or other wise defective rods. A flash takes the rod and follows it to where the break exists, then finds its next best onductor within the building, immediately opposite the snot where it discovered the break, through the wall, perhaps where the family are sitting, and deals death around it, finding its way into the earth by tortuous channels, the stove-pipe, the gas pipe, or in their absence, by shattering the wood-wor and plastering. Defective rods of any kind are mere traps to bring lightning into a house, instead of keep ing it out. They are the most dangerous fixture a man can have about him, and though numerous crudely written paragraphs are constantly affoat of houses being damaged, though provided with rods, yet it may

stance the rod has been m up meanly and cheaply by direction of a penurious owner, or by an ignorant and incompetent peddier. The principle of protection developed by Franklin remains sound, and all that is needed to secure perfect immunity from danger, is a strict adherence to what we know it demands as the condition of safety. As the usual term for thunder-storms is coming on, every careful householder should have his lightning roda ex amined, and if found defective, put in perfect order The joints should be seen to be close and tight, for con timity is indispensable to safety. If the Winter's storm has bent that part which projects above the roof, it should be taken down and straightened. See, also, that the lower section which goes into the ground has not rusted off, as is often the case; and this thorough examination should be made every year.

Thunder-clouds are charged with different degree of intensity, some heavily, some lightly. Some sweep over the earth at a greater altitude than others. Thou which hang low discharge their contents, whether of water or electricity, with the greatest energy. All our thunder-storms, with few exceptions, come up from the north-west. Hence the conductors should be erected at those points of the building with which the cloud will first come in contact. This is necessary ecause every thunder-cloud is surrounded by an ele tric atmosphere which precedes the cloud itself. This may be easily verified by placing the knuckle to the conductor as the cloud approaches. Sparks will fre-quently be drawn from it while the thunder yet rolls in the distance, showing that the electrical haze has already enveloped the building, and that the rod is silently conducting the fluid into the earth. The rod is already performing its functions with the mere electrical atmosphere, just as it would seek to do if assailed by an explosion from the cloud. But thousands of rods have been put up by the peddlers in direct viola-tion of this rule, even when the prominent points of the building were in the proper quarter. The gableends of barns most remote from the approaching cloud are selected by them as frequently as the proper end. Persons of he highest pretensions in their business of making conductors are constactly committing this grievous error. It cannot be too spee fily and generally corrected. Some five years ago a young woman was picking cherries in a tree which stood near her father's nouse, in Warren Co., New-Jersey. A cloud was seen to be approaching, though at a great distance. But it was surrounded and preceded by a highly excited electrical atmosphere. There was no rain, as the cloud was a great way off. Yet persons in the neighborhood saw a flash traverse the air in an almost horizontal line, and shatter the tree in which the girl was eated, and she was killed. This was an unusual ecurrence, and yet a similar discharge has been seen to leave a cloud and traverse a great distance, until it reached a stream of rarefied air, sent up from a barn but recently filled with new hay. It followed this stream as a choice conductor, struck and destroyed the

This presence of an electrical atmosphere has some times exhibited the mest remarkable phenomens. The great lightning storm of June, 1848, was especially productive of them. Mr. Cooper's extensive rolling-mill at Trenton, N. J., seemed to be charged in every part with electricity. Though that storm extended ever surface of 700 miles, yet no place witnessed a more sin gular display of its mighty energies than Trenton The lightning struck the earth there repeatedly. A workman at the rolling-mill attempted to lower the iron damper, which was connected with iron chains but he no scoper laid his hand on the latter than he re ceived a shock which prostrated him. A second work man repeated the attempt, and was in turn knocked down, while the third also received a severe shock A fireman attempted to stir the melted iron in the fur nace, but the instant his iron stirrer touched the fluid metal he received a violent shock. Other similar facts occurred, showing that the whole atmosphere was charged with electricity to an extraordinary extent, and that chains, bars, furnaces, and even the melted metal, were silently acting as conductors between the cloud and the earth, giving out neither shock nor spark unless touched by the unconscious workman. The masses of metal which surrounded the 300 hands employed in the mill were so many potent protectors; but the same precautions should be used to guard against the electrical atmosphere which invariably precedes and

surrounds a thunder-cloud, as against the cloud itself The true position to which the rods should be af fixed having been ascertained as mentioned above, the next important question is as to the quantity of iron to be used. A wire one-quarter inch thick will effectu ally protect any building, providing there be a point of stiff metal set up on every prominent part, with as many outlets into the ground as there are points in the ing over the building. Galvanized wire is preferable to all others, as it is not liable to oxidation. The greater the quantity of iron, and the more numerous the outlets, the greater the safety. This is in accordance with Franklin's directions, except that the quan-tity of iron is increased. A large building should have some hundreds of feet of rod, and any building whatever should have not less than two points and two outlets. There is a good reason for this apparent profu sion of iron. Explosions of electricity vary in intensity, some being very feeble, while others are of awful power. No certain calculation can be made as to whether the coming shock will be light or heavy; hence it is prudent to guard against the latter, as doing so we effectually disarm the former. A light shock will be carried off by a single rod without in jury; but the discharging power of such a rod being uniform with its receiving power, because of its single outlet an explosion on its point may occur, charged with so prodigious a volume of electricity that the capacity of the rod is not great enough to carry it off. Herein lies the great danger of an insufficient con ductor. The discharging power being fixed and lim ited, any excess of electricity will leave the conductor fly off into the house in search of another, whether i be the stove-pipe or the human body, and do its deadly work. Innumerable cases where such results have followed an excessive discharge on a conductor having a single outlet to the earth are on record. Accounts are often published of injury to buildings, though protected by conductors; but careful examination into the facts of the case has invariably shown that though the conductor was free from defect, its capacity was too small to break up and carry off a heavy shock. It follows, then, that the discharging power of a con ductor must be equal to its receiving power; that building should be armed with points on all its prominent projections, because no calculation can be made on which prominence the shock may fall, that these receiving points should have numerous discharging points descending to moisture in the earth, and that the whole should be connected by wires in several directions across the roof, so that whichever point may happen to receive the shock will be aided by the entire network of metal in instantly mitigating its intensity by distributing it over a large surface, and passing it off by numerous outlets. The fluid concentrated in this shock had been previously distributed over the surface of an immense body of clouds. How unreas onable it is to expect a single discharging point to pass off the volume of electricity accumulated in so great a body of vapor. It is for these reasons that the cheap conductors are found so often mere traps, bringing the dangerous element into a building, instead of leading

It is a mistake, as well as a useless expense, to put up glass insulators to prevent the lightning from leaving the rod and passing into the house. No flash will quit a properly-constructed rod, because lightning never avoids a good conducting medium to follow and one. Hence, the rod being continuous and the staple not so, iron staples are entirely safe. An exsion will shatter glass ones into fragments, and the deet and ice of Winter will as certainly destroy them. As few thunder clouds pass over without discharging their watery contents, the glass insulators become wet, and while in that condition are zagood conductors

agated among the people ged in selling rods, on the peddlers engaged in selling rods, on the necessity glass insulators. They have introduced and sold the as indispensable to protection, either through entire ignorance of their worthlessness, or to enhance the profit on their wares. So, also, with respect to gold a platinum points, costing several dollars each. The serve no other purpose but to prevent exidation, the point of a lightning rod rurely or never existing its exposure to the air causes it to dry rapidly. Its exposure to the air causes it to dry rapidly. It galvanized iron be used, as recommended for the win it will stand for centuries uninjured. The great objective make every prominent part of the building to make every prominent part of the building. is to make every prominent part of the building brists with points, and to supply them with an abundance of outlets to the earth, giving to the whole rod a discharging power proportioned to, or even greater than the

Large sums are annually paid in this country for fancy clocks imported from France and Germany value of which commonly consists more in their one and timed work than in the excellence of their chinery and the accuracy of their movements. chenp clocks of Connecticut manufacture, the wheat of which are cut out by dies, are quite as good time-keepers as most of the foreign clocks, and take the place in this country, and to some extent in Euralso, where correct time-keeping at least possible is alone decired. In these and in watches made on the same principle of multiplying the parts by chinery, so that the pieces may be put togethered criminately, the American manufacture has of the years made great progress, lessening the foreign portations and greatly increasing the use of the valuable instruments. But in ornamental clo

valuable instruments. But in ornamental clocks we are still dependent upon European manufacturers.

We therefore welcome the introduction of a beautility of design, and so constructed so possess the accuracy of movement of a chronometer watch. Its works, moreover, are fully exposed a view under the glass that incloses them, and a better than offended of leaving the mindel. opportunity is thus afforded of learning the principle upon which this useful machine is constructed the from any other clock in use. Children, as well a grown persons, attracted by its ornamental appearage and the graceful springing of its balance-wheel, as soon led to understand the escapement and the unfeatures of both clocks and watches.

The clock to which we refer is a recent invention of Mr. James Tuerlynx of this city. Its chief peculiarity consists in its motive power. Upon the circular metallic plate which forms the base of the clock is firmly an upright steel screw, standing from tent of fifteen fixed inches in hight. A metallic ball of about two is weight is penetrated through its center by this serse, and when at the upper end tends to run down the spiral isclined plane by revolving around it. By an ingenious arrangement, it is made to roll upon a little wheel at tached to the top of the weight, without itself touching the screw; the friction is thus reduced to the less possible amount; and as by raising the weight this lit-tle wheel starts back and again catches in the thread of the screw at whatever point the weight is lifted, the only winding up required is simply to raise the weight, and for this a rod is provided, the up-per end of which terminates in a ring or knot outsite the clock, and the lower end in a circle, which takes the base of the weight as the rod is lifted. The reve lution of the ball is communicated to the main wheel which lies horizontally upon the bottom of the plate by means of two rods that pass through the ball and are fixed to this wheel. A horizontal bar connects their upper ends, and the middle point of this bar is supported and turns upon the top of the screw. On supported and turns upon the top of the screw. On this center is the wheel, attached to the upper surface of the cross-bar, which regulates the movement of the hands upon the dial. The main wheel at the base is connected immediately with the escapement and bal-ance-wheel, by which its motion is checked and let out tick by tick with each swing of the balance. In these clocks the balance is on the compensation principle. The regulation is like that of a watch, and is reached by a wire introduced when required through a little hole made in the glass for this purpose. From the perfection of the works, and the holes being jeweled, the clock runs at regular rates, and as a time-keeper's probably not surpassed by any other of the same cost. The works are perfectly protected from dast, and the hands are covered by a glass like that of a watch, or when inclosed, as in some of the clocks, under the glass cylinder, they may be reached through a

hole made opposite to them in the glass, by a long key constructed for this purpose.

The important points in this clock are: first, the uniform manner of action of the motive power; second, is direct action upon the main wheel without the interven-tion of toothed wheels, which in other clocks introduce additional friction and causes of irregularity. The mo tive power required is thus lessened, and the wear preportionally reduced. It is variously constructed wis one to three dials, and to run 36 hours, 50 hours, or eigh days. For family use, no inconvenience is exper-enced in the use of those which run only 36 hours, a the position of the weight is at all times seen, ast whenever at a low point, is readily lifted by any men ber of the family. One of the clocks has been in us for about eight months in the office of the Cooper Union in this city, and has attracted much attention and admiration, especially from engineers and gentemen of a mechanical taste. On one of three dials, which is also there, the maker proposes, on the visit of the Japanese, to set one dial for New-York time, one or London, and one for Yeddo time. This use of two or more dials for time of different cities, suggests the propriateness of the clocks for marine service, and ecially for steamers passing across the Atlantic.

-Sen-sickness is supposed to be caused by the w ward movement of the mass of the intestines which takes place when the motion of the ship changes from rising to falling. This mass pressing against the disphragm squeezes the bile out of the liver into the storch, which causes nausea and vomiting. But M. J. oard now declares that the electric belt discovered b a M. Mosselman, of Brussels, is a cure for sea-siet ness in ninety-eight cases in a hundred. It is a que tion whether the belt does more than to compress to

mach and prevent this movement. -The analysis of the waters of Lombardy collection luring the late Italian campaign has resulted in shoring that in those districts where goitre is most pre-lent the water has large proportions of carbonate of sulphuret of lime and no chlorine or salts of magne-

FROM BARBADOES .- By the arrival of the bark Mer

lower, we have Barbadoes dates to May 22. The British sloop Sea Flower, of Grenala, had seized at Martinique for violation of the French commercial regulations, and compelled to pay a fine. The supercargo complained bitterly of the treatment of ceived at the hands of the Frenchmen who boards the vessel. They were eight in number, two of the being gendarmes and one a custom-house officer. Purcell states that they were very drunk, and run on the sloop's deck like madmen or pirates, beside pistols, and threatening to shoot the people of the dec

They did not, however, carry out their threats.

The market was overstocked with all kinds American produce. The health of the island was well good, but there had been but little rain. The bed district presents quite a sad appearance to one set tomed to view it in its former state; and owing be tardiness of the commissioners but little improvements. ardiness of the commissioners, but little improv being made.

The sugar crop of Barbadoes will exceed last put by 1,000 to 2,000 hhds., while the sugar itself is do

The bark N. H. Gaston arrived on the 8th New-York, 18 days.

The steamship Monticello, Capt. Gager, arrived yesterday morning from Washington, 0.6, brought about 40 tuns of baggage belonging by Japanese, which will be forwarded to the Navy Islands